Abstract

A description is given of a method for determining the content of a first component of a sample, which first component provides a first NMR signal and has a first self-diffusion coefficient D_1, the sample additionally containing at least one further component which provides a further NMR signal and has a larger self-diffusion coefficient D_2, in particular for determining the fat content of a hydrous sample, with the aid of a low-resolution nuclear magnetic resonance (NMR) pulse spectrometer, the sample being excited by a radio-frequency (RF) excitation pulse and being exposed to a magnetic gradient field and to a sequence of further refocusing RF pulses for generating spin echo signals, the spin echo signals being detected and their amplitude values being determined, from which a value for the content of the first component of the sample is determined. The magnetic gradient field is not switched off during the sequence of further refocusing RF pulses.